

# Conditions and If statements

- Python supports the usual logical conditions from mathematics:

- Equals: `a == b`
- Not Equals: `a != b`
- Less than: `a < b`
- Less than or equal to: `a <= b`
- Greater than: `a > b`
- Greater than or equal to: `a >= b`

```
a = 1
b = 2
a == b
a != b
a < b
a > b
a <= b
a >= b
```

# Conditions and If statements

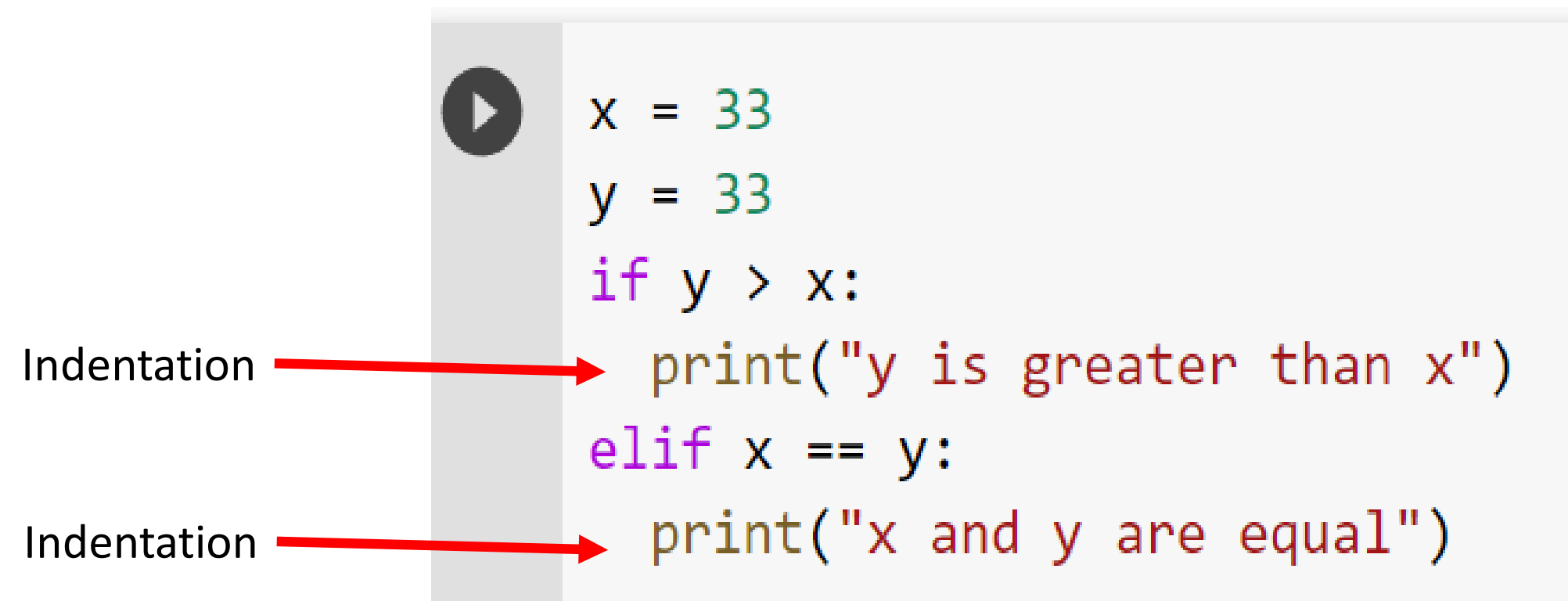
- An if statement is written using the **if** keyword.
- **Important:** Python relies on **indentation** (whitespace at the beginning of a line) to define the scope in the code.
- The **elif** keyword is Python's way of saying, if the previous conditions are not true, then try this condition:

```
x = 200
y = 33
if x > y:
    print("x is greater than y")
```

```
x = 33
y = 33
if y > x:
    print("y is greater than x")
elif x == y:
    print("x and y are equal")
```

# Indentation

- Indentation refers to the spaces at the beginning of a code line.
- Python uses indentation to indicate a block of code.
- The number of spaces is up to you, but use the same number of spaces in the same block of code



```
x = 33
y = 33
if y > x:
    print("y is greater than x")
elif x == y:
    print("x and y are equal")
```

Indentation →

Indentation →

# If statements – Try it out

```
[13] a = 100  
     b = 35  
     c = 501  
     if a > b and c > a:  
         print("Both conditions are True")
```



```
a = 100  
b = 35  
c = 501  
if a > b or a > c:  
    print("At least one of the conditions is True")
```